

REMARKS

In the Office Action, the Examiner rejects claims 1, 2, 8, 10-12, and 17-19 under 35 U.S.C. § 102(e) as anticipated by WEBER (U.S. Patent No. 6,434,524); rejects claims 3, 4, 9, 13, and 14 under 35 U.S.C. § 103(a) as unpatentable over WEBER in view of MAHAJAN et al. (U.S. Patent No. 6,418,431); rejects claims 15 and 16 under 35 U.S.C. § 103(a) as unpatentable over WEBER in view of PADMANABHAN et al. (U.S. Patent No. 6,385,579); allows claims 20-24; and objects to claims 5-7 as containing allowable subject matter. Applicants respectfully traverse the art rejections.

By the present amendment, Applicants amend claims 2, 3, and 17 to improve form. Claims 1-24 remain pending.

Applicants note with appreciation the indication that claims 20-24 are allowable over the art of record and that claims 5-7 would be allowable if rewritten into independent form to include all the features of the base claim and any intervening claims.

Claims 1, 2, 8, 10-12, and 17-19 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by WEBER. Applicants respectfully traverse this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. See M.P.E.P. § 2131. WEBER does not disclose or suggest at least one feature recited in claims 1, 2, 8, 10-12, and 17-19.

For example, independent claim 1 is directed to a method for providing search results. The method includes receiving a voice search query from a user; deriving one or more recognition hypotheses from the voice search query, where each recognition

hypothesis is associated with a weight; constructing a weighted boolean query using the recognition hypotheses; providing the weighted boolean query to a search system; and providing results of the search system. WEBER does not disclose or suggest at least one of these features.

For example, WEBER does not disclose or suggest constructing a weighted boolean query using the recognition hypotheses. The Examiner alleges that WEBER's possible matching entries in natural language processing (NLP) database 218 corresponds to the recited recognition hypotheses (Office Action, pg. 3) and relies on col. 11, lines 39-49, which describes Step 348 in Fig. 3C, of WEBER for allegedly disclosing the above feature of claim 1 (Office Action, pg. 3). Applicants submit that this section of WEBER do not disclose or suggest the above feature of claim 1.

At col. 11, lines 39-49, WEBER discloses:

The nature of the test performed at decision 348 is a boolean "AND" test performed by boolean tester 210. The test determines whether each one of the non-noise words in the phrase (or its synonym) is actually present in the highest-confidence entry. If there are a sufficient number of required words actually present in the highest-confidence entry, then the flow proceeds to block 350, where the natural language processor 202 directs application interface 220 to take an associated action from column 408 or 410. It is understood that additional action columns may also be present.

This section of WEBER discloses that the non-noise words of a received phrase are compared to the words in the highest-confidence entry from NLP database 218. As set forth above, the Examiner alleges that the possible matching entries in NLP database 218 correspond to the recognition hypotheses, recited in Applicants' claim 1. With this interpretation in mind, this section of WEBER does not disclose or suggest constructing a weighted boolean query using the possible matching entries in NLP database 218, as

would be required by the Examiner's interpretation of Applicants' claim 1. Instead, this section of WEBER merely discloses matching words in a received phrase to the entry in NLP database 218 that matches the phrase with the highest confidence. One skilled in the art would clearly recognize that this is quite different from constructing a weighted boolean query using the possible matching entries in NLP database 218. WEBER does not disclose or suggest such a feature.

The Examiner also appears to rely on col. 10, lines 49-61, which describes Step 338 of Fig. 3B, of WEBER for allegedly disclosing constructing a weighted boolean query using the recognition hypotheses, as required by claim 1 (Office Action, pg. 3). Applicants submit that this section of WEBER does not disclose or suggest this feature of claim 1.

At col. 10, lines 49-61, WEBER discloses:

At block 338, a confidence value is generated for each of the possible matching entries based on the number of occurrences of each of the words in the phrase and their relative weights. Weighted word searching of a database is well known in the art and may be performed by commercially available search engines such as the product "dtsearch" by DT Software, Inc. of Arlington, Va. Likewise, searching using synonyms is well known in the art and may be accomplished using such publicly available tools such as "WordNet," developed by the Cognitive Science Laboratory of Princeton University in Princeton, N.J. The search engine may be an integral part of the natural language processor 202

This section of WEBER discloses that a confidence value is generated for each possible matching entry in NLP database 218. This section of WEBER in no way discloses or suggests, however, constructing a weighted boolean query using the possible matching entries in NLP database 218, as would be required by the Examiner's interpretation of

Applicants' claim 1. The Examiner has not pointed to any section of WEBER that discloses this feature.

Since WEBER does not disclose constructing a weighted boolean query using recognition hypotheses, WEBER cannot disclose providing the weighted boolean query to a search system, as also required by claim 1. With respect to this feature, the Examiner alleges "'means for providing the weighted Boolean query to a search system' – searching of the databases for information about news, stocks, weather, movies, and web pages is performed by boolean 'AND' search logic for each of the words in the phrase (or its synonym)" (Office Action, pp. 3-4). Applicants respectfully disagree.

WEBER discloses that a received phrase is compared to entries in NLP database 218 and confidence values are determined for each possible matching entry (col. 10, lines 45-61). The confidence values are then compared to a threshold (col. 10, line 62, to col. 11, line 10). If an entry in NLP database 218 exists whose confidence value is greater than the threshold, then noise words are removed from the phrase (col. 11, lines 11-23). It is then determined if a required number of remaining non-noise words are present in the entry from NLP database 218 (col. 11, lines 24-43). If the required number of non-noise words is present in the entry, then natural language processor 202 directs application interface 220 to take an associated action, such as accessing a movie web site, directing a text-to-speech application to speak the present time, accessing a predetermined news web site (col. 11, lines 43-67). Contrary to the Examiner's allegation, WEBER does not disclose or suggest searching databases for news, stocks, weather, movies, or web pages. Also, WEBER does not disclose or suggest providing a

weighted boolean query that is constructed using recognition hypotheses to a search system, as required by claim 1.

For at least the foregoing reasons, Applicants submit that claim 1 is not anticipated by WEBER.

Claims 2, 8, and 10-12 depend from claim 1. Therefore, these claims are not anticipated by WEBER for at least the reasons given above with respect to claim 1. Moreover, these claims recite additional features not disclosed or suggested by WEBER.

For example, claim 8 recites that the providing results of the search system includes adjusting a ranking of the results of the search system based on the weights. With respect to this feature, the Examiner alleges "providing a highest-confidence entry after discarding 'noise' words is equivalent to 'adjusting a ranking of the results of the search system based on the weights'" (Office Action, pp. 4-5). Applicants respectfully disagree.

As set forth above, the Examiner alleges that the "search system," required by Applicants' claim 1, is equivalent to WEBER's alleged teaching of searching databases for information about news, stocks, weather, movies, and web pages (Office Action, pp. 3-4). With respect to the feature recited in claim 8, however, the Examiner appears to allege that the recited "search system" corresponds to searching NLP database for entries matching the received phrase. This clearly contradicts the Examiner's allegations with respect to claim 1.

Nonetheless, if the Examiner is now alleging that the possible matching entries in NLP database 218 correspond to the results obtained by the search system, recited in

claim 1, WEBER does not disclose or suggest adjusting a ranking of the possible matching entries from database 218. Instead, as set forth above, WEBER discloses that a received phrase is compared to entries in NLP database 218 and confidence values determined for each possible matching entry (col. 10, lines 45-61). The confidence values are then compared to a threshold (col. 10, line 62, to col. 11, line 10). If an entry in NLP database 218 exists whose confidence value is greater than the threshold, then noise words are removed from the phrase (col. 11, lines 11-23). It is then determined if a required number of remaining non-noise words are present in the entry from NLP database 218 (col. 11, lines 24-43). If the required number of non-noise words is present in the entry, then natural language processor 202 directs application interface 220 to take an associated action, such as accessing a movie web site, directing a text-to-speech application to speak the present time, accessing a predetermined news web site (col. 11, lines 43-67). Contrary to the Examiner's allegation, WEBER does not disclose or suggest that providing a highest-confidence entry from NLP database 218 is in any way equivalent to adjusting a ranking of the results of the search system based on the weights, as required by claim 8.

For at least these additional reasons, Applicants submit that claim 8 is not anticipated by WEBER.

Independent claims 17-19 recite features similar to features recited above with respect to claim 1. Therefore, Applicants submit that these claims are not anticipated by WEBER for reasons similar to reasons given above with respect to claim 1.

Claims 3, 4, 9, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over WEBER in view of MAHAJAN et al. Applicants respectfully traverse this rejection.

Claims 3, 4, 9, 13, and 14 depend from claim 1. Applicants submit that the disclosure of MAHAJAN et al. does not remedy the deficiencies in the disclosure of WEBER set forth above with respect to claim 1. Therefore, claims 3, 4, 9, 13, and 14 are patentable over WEBER and MAHAJAN et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1. Moreover, these claims recite additional features that are neither disclosed nor suggested by the combination of WEBER and MAHAJAN et al.

For example, claim 13 recites determining a quantity of results related to each recognition hypothesis and discarding recognition hypotheses having no results. With respect to these features, the Examiner alleges that "*Mahajan et al.* teaches adapting a language model based on the information retrieved as a result of the executed query" and points to col. 8, lines 16-53, of MAHAJAN et al. for support (Office Action, pg. 8). Regardless of the veracity of the Examiner's allegation, the allegation in no way addresses the features recited in claim 13. That is, the Examiner does not logically explain how this alleged teaching of MAHAJAN et al. in any way relates to the features recited in Applicants' claim 13.

Further with respect to claim 13, the Examiner alleges "*Weber ('524)* discloses that phrases having no matching entry with a confidence value greater than a threshold have zero hits, and produce an error message" and points to col. 11, lines 1-10, of

WEBER for support (Office Action, pg. 8). Regardless of the veracity of the Examiner's allegation, the allegation in no way addresses the features recited in claim 13. That is, the Examiner does not logically explain how this alleged teaching of WEBER in any way relates to the features recited in Applicants' claim 13.

Since the Examiner did not address the specific features recited in claim 13, a *prima facie* case of obviousness has not been established with respect to claim 13.

For at least these additional reasons, Applicants submit that claim 13 is patentable over WEBER and MAHAJAN et al., whether taken alone or in any reasonable combination.

Claim 14 recites determining a quantity of results related to each recognition hypothesis and adjusting the weight associated with the recognition hypothesis based on the quantity. With respect to these features, the Examiner alleges that "*Mahajan et al.* teaches adapting a language model based on the information retrieved as a result of the executed query" and points to col. 8, lines 16-53, of MAHAJAN et al. for support (Office Action, pg. 8). Regardless of the veracity of the Examiner's allegation, the allegation in no way addresses the features recited in claim 14. That is, the Examiner does not logically explain how this alleged teaching of MAHAJAN et al. in any way relates to the features recited in Applicants' claim 14.

Further with respect to claim 14, the Examiner alleges "*Weber ('524)* discloses that phrases having no matching entry with a confidence value greater than a threshold have zero hits, and produce an error message" and points to col. 11, lines 1-10, of WEBER for support (Office Action, pg. 8). Regardless of the veracity of the Examiner's

allegation, the allegation in no way addresses the features recited in claim 14. That is, the Examiner does not logically explain how this alleged teaching of WEBER in any way relates to the features recited in Applicants' claim 14.

Since the Examiner did not address the specific features recited in claim 14, a *prima facie* case of obviousness has not been established with respect to claim 14.

For at least these additional reasons, Applicants submit that claim 14 is patentable over WEBER and MAHAJAN et al., whether taken alone or in any reasonable combination.

Claims 15 and 16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over WEBER in view of PADMANABHAN et al. Applicants respectfully traverse this rejection.

Claims 15 and 16 depend from claim 1. Applicants submit that the disclosure of PADMANABHAN et al. does not remedy the deficiencies in the disclosure of WEBER set forth above with respect to claim 1. Therefore, claims 15 and 16 are patentable over WEBER and PADMANABHAN et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1.

In view of the foregoing amendment and remarks, Applicants respectfully request the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

HARRITY & SNYDER, L.L.P.

By: _____


John E. Harrity

Registration No. 43,367

Date: January 21, 2005

11240 Waples Mill Road
Suite 300
Fairfax, Virginia 22030
(571) 432-0800

Customer Number: 44989